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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/366,299	08/02/1999	SEOK-JIN HAM	678-318(P882	2887

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EXAMINER

NGUYEN, TU X

ART UNIT	PAPER NUMBER
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2618

MAIL DATE	DELIVERY MODE
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06/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/366,299

Applicant(s)

HAM, SEOK-JIN

Examiner

Tu X Nguyen

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,8-26 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-23 is/are allowed.
- 6) ☒ Claim(s) 1-5,8-10, 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 16.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

Applicant is required to label "prior art" for figures 1 and 2, as the specification admitted prior art page 6, a "conventional" billing procedure figure 1 and a "typical" electronic switch figure 2.

Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Response to Arguments

Applicant's arguments, filed 2/13/06, with respect to claims 1, 8 and 24, have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-10 and 24-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant admitted prior art in view of Wittstein et al. (US Patent 5,631,947).

Regarding claim 1, the Applicant admitted prior art disclose a method of billing service in an electronic switch in a cellular network, comprising the steps of:

setting a time when service initiation request (see page 2, lines 17-18) or a service resumption request is generated as a service start time and initiating a call;

setting a service suspension request time as a service end time upon generation of a service suspension request by the system during the service and suspending the service (see 96 fig.4, col.5 lines 19-24 and col.18 line 50 through col.19 line 5, "drop calls" reads on "service suspension request by the system", and "a minute of drop call" which includes "start time and end time of service suspension");

sending billing data including the service start time and the service end time (see page 3, lines 11-13); and

ending the service when a service termination request is generated (see page 3 lines 11-13).

The Applicant admitted prior art fails to disclose a service suspended state.

In the related art, Wittstein et al. disclose a service suspended state (see col.18 lines 50-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the Applicant admitted prior art with the above teaching of Wittstein et al. in order to give back the credit that was cause by drop calls or interrupted by local interference or other causes.

Regarding claims 2-3, the modified Applicant admitted prior art discloses the service initiation request is generated when an outgoing call, an incoming call is answered (see Applicant admitted prior art, page 2 line 13 through page 3 line 6).

Regarding claims 4-5, the modified Applicant admitted prior art discloses the service suspension signal is sent by the BSC to notify that a frames are not normally transmitted or a frame transmission resumes (see the Applicant admitted prior art, page 7 line 6 through col.8 line 15).

Regarding claims 8, the Applicant admitted prior art disclose a method of billing service in an electronic switch in a cellular network system comprising the steps of:

calculating, accumulating and constructing billing data and sending the billing data to a billing processor (see page 2-3).

The Applicant admitted prior art fails to disclose a service suspended state.

In the related art, Wittstein et al. disclose a service suspended state (see col.18 lines 50-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the Applicant admitted prior art with the above teaching of Wittstein et al. in order to give back the credit accumulating the cause by drop calls or interrupted by local interference or other causes.

Regarding claims 9-10 and 25-26, the modified Applicant admitted prior art discloses the service suspended period is the difference between a service suspension start time and service suspension end time (see Wittstein et al., col.18 lines 50-67).

Regarding claims 24, the Applicant admitted prior art disclose a method of billing service in an electronic switch in a cellular network system comprising the steps of:

calculating, billing a subscriber period during a service in process and sending the billing data to a billing processor (see page 2-3).

The Applicant admitted prior art fails to disclose a service suspended state.

In the related art, Wittstein et al. disclose a service suspended state (see col.18 lines 50-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the Applicant admitted prior art with the above teaching of Wittstein et al. in order to give back the credit by subtracting the cause by drop calls or interrupted by local interference or other causes.

Allowable Subject Matter

Claims 11-23 are allowable.

The following is an examiner's statement of reasons for allowance:

Regarding claim 16, the prior art fails to teach "setting a service resumption request time as a service suspension end time upon request for service resumption in the service suspended state, calculating the service suspended time from the service suspension start time and the service suspension end time" and "setting a service termination request time as a service end time upon request for service termination in the service suspended state, calculating a service suspended time from the service suspension start time and the service end time" as cited in the claim.

Regarding claims 11 and 21, the prior art fails to teach "designating an unique index upon request for service suspension during a service" as cited in the claims.

Regarding claim 23, the prior art fails to teach "producing a total service suspended period by multiplying the number of service suspension occurrences by an average service suspended period, subtracting the total service suspended period from an overall service, and billing a subscriber forward a resulting normal service period", as cited in the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 571-272-7883.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'J. M.' followed by a checkmark-like flourish.

May 16, 2007